

103

# ADMINISTRATION VIEWS ON GLOBAL CLIMATE CHANGE

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Y 4.F 76/1:G 51/7

Administration Views on Global Clin...

## HEARING

BEFORE THE  
SUBCOMMITTEE ON  
ECONOMIC POLICY, TRADE AND ENVIRONMENT  
OF THE  
COMMITTEE ON FOREIGN AFFAIRS  
HOUSE OF REPRESENTATIVES  
ONE HUNDRED THIRD CONGRESS

FIRST SESSION

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MAY 18, 1993

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Printed for the use of the Committee on Foreign Affairs



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## ADMINISTRATION VIEWS ON GLOBAL CLIMATE CHANGE

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TUESDAY, MAY 18, 1993

HOUSE OF REPRESENTATIVES,  
COMMITTEE ON FOREIGN AFFAIRS,  
SUBCOMMITTEE ON ECONOMIC POLICY,  
TRADE AND ENVIRONMENT,  
*Washington, DC.*

The subcommittee met, pursuant to call, at 1:30 p.m. in room 2172, Rayburn House Office Building, Hon. Sam Gejdenson (chairman of the subcommittee) presiding.

Mr. GEJDENSON. The committee will come to order.

It is a privilege for the committee to have a former colleague of ours and a former U.S. Senator.

Tim, it is great to have you here. Your record on environmental issues and your work in both the House and the Senate gives those of us who worked with you great confidence that you will undertake your new responsibilities and put America in the lead again.

From the start of the global warming debate, many have argued that we cannot protect the global environment and the interests of U.S. business at the same time. Tough action on global warming, they argue, will cause far-reaching damage to the American economy.

I might add that our colleague George Miller, when he returned from Rio, said that what he saw was America under the previous administration, apologetic about environmental issues. The Japanese, with exhibit after exhibit of Japanese technology and environmental clean-up methods, have caused great frustration for the United States. America, who is really taking much of the lead in this environmental technology, is not taking advantage of it.

And, clearly, from my perspective, nothing could be further from the truth. American firms are on the cutting edge of renewable energy, energy efficiency, and clean coal technologies. Tough U.S. action to stem global warming will help ensure that American firms will move forward with environmentally sound technologies which will not just give us an advantage in the international marketplace but will give us an advantage in our own productivity here at home.

In the subcommittee's hearing in March on the global climate change, it was clear that the Bush administration's National Action Plan failed to grasp that basic concept. This was by no means the only flaw in the draft plan.

The plan failed because it did not commit the United States to return to 1990 levels on greenhouse gas emissions by the year 2000.

The plan provided no direction for American policy because it simply restated existing U.S. efforts to reduce greenhouse gas emissions.

The plan returned to the "hat and sunglasses" days of former Secretary James Watt by giving too much attention to the different ways that Americans can live with the effects of global warming and the rising of our oceans.

President Clinton, however, has made it clear that Congress can expect a completely different global warming policy from this administration. In his recent Earth Day speech, the President announced that the previous administration's National Action Plan would be thoroughly rewritten and a dramatic break with the past. He also said that the United States would return to the 1990 levels of greenhouse gas emissions by the year 2000.

Today, we have the opportunity to receive your testimony, and we are fortunate to have you heading this administration's efforts to protect global warming. I called today's hearing so that we could discuss the details of the new administration—the Clinton administration's new global climate policy with you in particular.

I would like to examine the strengths and weaknesses of the draft plan from the Clinton administration's standpoint, the new policies and programs being considered by the administration to improve the plan's effectiveness; the timetable for reviewing and approving the plan, particularly those aspects related to technology transfer; and the possibility of committing the United States to further reduction of greenhouse gases beyond the year 2000.

By signing the Climate Change Convention in Rio, the United States agreed to draft a meaningful plan to reduce greenhouse gas emissions and help developing countries achieve this important objective. Having examined the previous administration's draft plan, it is clear that the United States has not yet lived up to its commitment. I believe the United States must put together a meaningful, far-reaching plan to reduce greenhouse gas emissions and to promote U.S. environmental technology firms.

Before giving you an opportunity to make your statement, I would yield to my Ranking Republican colleague, Mr. Roth.

Mr. ROTH. Thank you, Mr. Chairman. I will try to be brief.

Mr. Wirth, it is great to have you before our committee.

Mr. WIRTH. Nice to be here, Toby.

Mr. ROTH. For a while, I was wondering if you were ever going to be here. You were a great Member in the House and did a great job in the Senate, and we are honored that you are with us.

Let me join the chairman in welcoming our former colleague and congratulating you again on your appointment as Counselor for Global Affairs. You have some of the most difficult and important foreign policy issues in your jurisdiction. Global climate change is one of those. There is a big debate over global warming.

I remember you were in Chile a number of years ago and you were looking at this issue. You are well versed in this area; the debate over what is causing it and what the future trends will be.



But in signing the Rio Convention last June, President Bush committed the United States to doing what it can to limiting the growth of the harmful emissions into the atmosphere. Today we will hear how the Clinton administration will pick up on what President Bush started.

Before we look at the details, let us keep in mind that many nations signed on to the Rio Convention, but the United States is virtually the only one in coming up with a specific plan to meet the goals of that Convention. With one or two exceptions, no other country has done as much as we have; and no one, frankly, has done more.

So instead of debating how perfect our plan can be, let's also focus on how we can get other nations to meet their commitments.

Mr. Wirth, do you agree with that?

Mr. WIRTH. Oh, absolutely. I am going to address some of that in my statement. But I couldn't agree with you more, that we have a major leadership responsibility around the world, and it is appropriate that we exercise those responsibilities. Absolutely.

Mr. ROTH. Thank you, I look forward to your—to Mr. Wirth's testimony and the Q and A.

Mr. GEJDENSON. Tim, please proceed as you are most comfortable.

#### STATEMENT OF TIM WIRTH, COUNSELOR, DEPARTMENT OF STATE

Mr. WIRTH. Thank you, Mr. Chairman.

I am pleased to be back in this building in which I spent a dozen years. And I enjoyed almost all of that. And I am enjoying being back here today.

Mr. Roth, thank you very much for your kind opening comments.

Mr. Ballenger, we didn't have a chance to serve together, but I look forward to working with you in this new incarnation for me.

I am pleased to be here with this subcommittee, Mr. Chairman, which makes sense for the committee to focus on the issues of economic policy, trade, and the environment.

Let me say at the start that I greatly appreciated, and the administration greatly appreciated, your strong letter of March 25, in which you called for very strong U.S. action and leadership. We appreciate that and look forward to using that as further spring board for cooperation between the administration and the Congress on these enormously important issues.

Foremost among the challenges that we face is a broad set of international environmental concerns about which we are learning more all the time. Perhaps overarching all others in terms of its centrality, complexity, and challenge is broad scientific and international concern about the issue of global climate change. Addressing this issue will require close collaboration between the administration and the Congress, including this committee.

It will also require significant U.S. leadership as pointed out in Congressman Roth's question because we cannot solve this problem on our own. We must help guide the international resolve that has developed in support of action to prevent dangerous human intervention in the complex climate system that influences so many aspects of our society and our world.

Let me begin, if I might, Mr. Chairman, by reviewing the international context in which we now confront the issue of global warming.

While concern about human intervention in the Earth's natural climate system has existed for some time, global warming has emerged rapidly in recent years as a powerful foreign policy and diplomatic issue. Driving this process have been advances in the scientific basis for concern.

As our understanding of the atmosphere has improved, we become more aware of how our actions affect it. It is clear that human activities are increasing atmospheric concentrations of greenhouse gases, carbon dioxide, methane, and nitrous oxide.

While there are uncertainties about the magnitude, timing, and regional patterns of greenhouse gas concentrations, there is sound scientific evidence that the rate of climate change in the next century would exceed any natural changes that have occurred in the last 10,000 years.

There is also evidence that the Earth would be warmer than it has been in millions of years. Further, the change in atmospheric composition will persist for decades and possibly centuries because of the long atmospheric lifetime of some of these greenhouse gases.

Last year, the international committee acknowledged this scientific concern and took the first steps to address this significant challenge for the world. More than 150 nations signed a Framework Convention on Climate Change at the Earth Summit last June and to date it has been signed by more than 160 countries. The United States along with 16 other nations have already ratified the treaty.

As you on this committee are aware, Mr. Chairman, the Climate Convention was the subject of considerable discussion and debate in 1992. Let me take a moment to discuss specifically what is in the treaty.

The Climate Convention's ultimate objective is to, in its words: "Achieve, in accordance with the relevant provisions of the Convention, stabilization of the greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level could be achieved within a timeframe sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner."

This is a major undefined challenge perhaps requiring massive reductions in emissions. As a first step to agreeing to the international action required, the Convention set forth a series of commitments in Article 4. While the language of these commitments is rather confusing at times, let me quote the critical lines of paragraph 2 (a) and (b) of this article.

Article 4.2(A) states, "Parties shall adopt national policies and take corresponding measures on the mitigation of climate change by limiting . . . anthropogenic emissions of greenhouse gases and protecting and enhancing . . . greenhouse gas sinks and reservoirs. These policies and measures will demonstrate that developed countries are taking the lead in modifying longer-term trends in anthropogenic emissions consistent with the objectives of the Convention,

recognizing that the return by the end of the present decade to earlier levels of anthropogenic emissions . . . would contribute to such modification. . . .”

Article 4.2(B) goes on to say, “In order to promote progress to this end, each of these parties shall communicate . . . detailed information on its policies and measures referred to in subparagraph (a) above, as well as its resulting projected anthropogenic emissions by sources and removals by sinks of greenhouse gases . . . with the aim of returning individually or jointly to their 1990 levels these anthropogenic emissions. . . .”

While the language contained in these paragraphs is nonbinding in terms of emissions reduction requirements, the intent of the negotiators was to have countries move toward the Convention’s ultimate objective through the preparation of their inventories of net greenhouse gas emissions including both sources and sinks of all greenhouse gases and the adoption by developed countries of national policies and measures to mitigate climate change and limit greenhouse gas emissions.

Furthermore, the Convention calls for developed countries to provide resources to help developing countries meet their obligations under the Convention. And, finally, it calls for countries to report on the action they are taking to meet these commitments.

The Conference of the Parties, which the United States anticipates will meet for the first time in mid-1995, will review all of these reports and the adequacy of the commitments under the Convention. Subsequent reviews will take place at regular intervals with the second review coming no later than December 1998.

Since assuming office, President Clinton has directed the administration to conduct a broad review of international environmental concerns including global climate change. Through this process, the President has determined that the United States should provide leadership to help guard against undesirable global climate change.

President Clinton clearly set forth the direction of our climate policy in his Earth Day speech. He said, quote, “We must take the lead in addressing the challenge of global warming that could make our planet and its climate less hospitable and more hostile to human life. Today—said President Clinton—I reaffirm my personal, and announce our Nation’s commitment, to reducing our emissions of greenhouse gases to their 1990 levels by the year 2000.

“I am instructing my administration to produce a cost-effective plan by August that can continue the trend of reduced emissions. This must be a clarion call, not for more bureaucracy or regulation or unnecessary costs but, instead, for American ingenuity and creativity to produce the best and most energy-efficient technology.”

The administration is committed to seeing the Convention promptly implemented and, if necessary, strengthened.

To this end, the administration is taking a two-pronged approach: a domestic effort to reduce emissions and enhance sinks of greenhouse gases and an international effort including working to implement the Convention, and to support developing countries and countries moving toward free market economies, in meeting its goals.

To realize the domestic requirements of the President's commitment, preparations have begun to identify a plan to identify steps we can take to return U.S. emissions to 1990 levels by the year 2000. This will be the focus of our efforts in developing the August Plan.

Under the Climate Conventions Article 12, developed country parties must report on their actions within 6 months of the Convention's entry into force, which is expected by late 1994. The August Plan will be the cornerstone of that report, but we anticipate that the next full version of the U.S. National Action Plan will be developed after August in time to meet our Convention commitment.

In developing the August Plan, the administration intends to identify and pursue what we believe are numerous cost-effective actions which may bring us closer to our commitment of returning U.S. emissions to 1990 levels by the year 2000. The government has received a host of these kinds of measures as part of the public comment period established for the Bush administration draft Action Plan issued last December.

But these measures alone may not be enough to meet the longer-term goal of continuing the downward trend in emissions. If we are to accomplish that, we will need to look more broadly at a wide array of actions. More importantly, we will need to establish a framework for identifying new options for our action agenda as we come to grips with the long-term nature of addressing global warming. As we do so, we will need to identify those actions that are most cost-effective.

Shortly, the administration will announce how we will develop the plan to fulfill the President's commitment. This policy development will involve the executive office of the President and all relevant agencies. We will encourage instructive discussions from stakeholders and will expect to hear some new ideas and fresh thinking about how Federal policy can enhance markets for energy efficient technology and make our economy more competitive while reducing our emissions of greenhouse gases.

The essential difference between the Clinton administration and the previous administration on climate change is that we are developing a domestic climate change policy and will use that policy to play a leadership role in promoting an effective global response. Our policy development process will represent a significant departure from that undertaken by the Bush administration when it produced a draft action plan in December.

Let me briefly speak to the problems with that first iteration, particularly through the public comment process.

Although the Bush plan met the letter of the requirement established by the "Prompt Start" Resolution, it was not adequate to the task before us: meeting a national commitment to reduce our emissions to 1990 levels by the year 2000 and continuing our efforts over the long term. We learned from that plan and hope to constructively build upon it.

Here are a few examples. The first draft extensively discussed our national circumstances but didn't set forth how we can best tailor our actions to reduce emissions to take account of those circumstances.

The first draft had a section on emissions inventories, but it didn't set forth clearly and concisely the baseline numbers or provide detailed descriptions of which gases are produced inside which sectors; all critical information for reducing emissions.

Much of this we learned again, Mr. Chairman, from the comment section when the Bush plan was submitted late in 1992. It was out, as you know, for public comment, and much of what we have learned is public comment on that as well as our own analysis of the plan.

The draft was incomplete on the measures that can be taken to mitigate the effects of climate change. It failed to state clearly what projected U.S. emissions levels would be either with or without the actions identified in the draft. The draft addressed emissions by the year 2000 but avoided any mention of trends beyond that date. In fact, there was virtually no discussion of steps that would be critical to develop a longer-term strategy, in particular, to develop low-emitting technologies and to engage the private sector.

And it is our intent to deeply engage in this process of setting up the plan to also deeply engage the private sector and as much of the nongovernmental organization sector as we possibly can.

In more than 40 sets of comments received on the Bush draft plan, one prominent theme was the number of activities underway in the private sector to reduce greenhouse gas emissions.

For example, in 1992, Pacific Gas and Electric, the Nation's largest utility company, through its own more than 50 conservation programs, was able to prevent the release of 280,000 tons of carbon. But the first draft did not include discussions of programs like PG&E's. Much more like that was being done in the private sector and should be acknowledged and credited.

The country has reached out and taken major steps in the private sector, and we want to incorporate that as thoroughly as we possibly can. If we are going to deal seriously with the threat of global climate change, we must find ways to harness the dynamism and creativity of our private sector and put market forces to work in support of environmental goals. It is the administration's expectation that the new plan will address these critical needs more fully.

Our actions alone, even as large as we are, will not be enough to reverse the overall trend in atmospheric concentrations of greenhouse gases. So we must establish a partnership with other countries, as suggested in Congressman Roth's opening comments. Sources of emissions are spread globally, and action to reduce emissions anywhere on the planet has global significance.

The United States currently contributes about 20 percent of global net emissions, although our share of the population is about 6 percent. Although our share of global emissions is declining, developing countries represent an increasing share of the total emissions; about 40 percent today and perhaps rising to 60 percent by the year 2030.

To make a significant contribution to protecting the climate, the United States must first demonstrate its own resolve and then leverage our example in encouraging efforts to reduce emissions the world over.

Within the scope of our limited resources, the United States must promote a partnership approach between developed and developing countries. Such an approach must reconcile different but compatible interests in environment and development. That these are compatible is clear. Assistance that we provide to developing countries will meet both of our needs; ours with respect to the strong concern that we have for the preservation of the global environment and creation of domestic jobs and environmental technologies, and theirs both for their own environmental concerns and for the concomitant requirement to continue along the path of environmentally sustainable economic growth.

To begin resolving this issue, industrialized countries will have to take the lead in implementing the Convention's commitments as agreed in the Convention language itself and encourage developing countries to follow.

In my view, such leadership will be linked to the quality of our national response as well as to the extent of financial and technical assistance we and other industrialized nations will provide to the developing world.

We have begun to demonstrate our concern for addressing the longer-term global effort. We are providing \$25 million to the U.S. country studies initiative to provide analytical and institutional foundation from which countries may develop appropriate measures and actions to address climate change. Studies enable countries to address vulnerabilities to climate change, measures to limit net greenhouse gas emissions, or both.

It is very clear that these country studies are very important, Mr. Chairman. And we are dedicated to working with other countries to help them identify baselines, identify what they are doing, and overall, with them, given a parallel set of data, to develop a stronger partnership. And we are very encouraged by the response of countries working with us on these country study efforts.

The country studies initiative coordinated through a State Department committee is operated by DOE, EPA, and AID.

Finally, a comment on potential modifications of the Convention and questions about that.

Under the provisions of the Climate Convention, all parties are called upon to formulate and implement programs to reduce greenhouse gas emissions with developing countries taking the lead. There is a broad agreement about the first step in this effort. Countries are aiming to return their emissions to 1990 levels by the year 2000.

To move forward, I believe that our work under the Convention must focus on even a longer term. Once all countries have ratified the Convention—and the State Department will be beginning a campaign to encourage this—we must evaluate the obstacles to its implementation and work to overcome them.

As I noted earlier, the preponderance of future emissions are most likely to come from the developing countries. We must, therefore, begin now to develop appropriate responses to help those countries reduce their emissions while continuing in the path toward economic prosperity, a response that is sure to involve the development and commercial exchange of new environmentally sound technologies.

One of the charges that has, in the past, been leveled against those who have advocated a strong environmental policy such as the one required to address global warming is that economic growth and environmentalism cannot coexist. I couldn't disagree more strongly. I strongly believe that a sustainable and environmental future is economically imperative. We must think about the long-term nature of the environment we pass down to our children. And, simultaneously, we must also concern ourselves with the present welfare of our country. Investment in environmental technology is one way to reach this goal.

As President Clinton noted in his Earth Day speech, there will be, by the end of this decade, a \$300 billion market for environmental technologies; and the United States must capture as much of that market, and the tens of thousands of jobs it will create, as possible. This in an area in which the United States can and must continue to be a leader. We must continue to build our technological markets both at home and abroad.

These are the kinds of programs that this administration will support in our efforts to address climate change.

As adopted, the Climate Convention is but one piece of the international policy framework that can help us redirect our thinking. The task before us is to take the next step. I look forward to working with you as we move ahead. The administration welcomes your input, support, and your involvement throughout this process.

Thank you very much. And I hope that my full statement will, Mr. Chairman, be included in the record. And I look forward to getting into discussions with you and members of the committee.

[The prepared statement of Mr. Wirth appears in the appendix.]

Mr. GEJDENSON. Thank you.

And again let me express not just for this committee but for other Members of the House—and I am sure as well for the Senate—that your appointment has given us great confidence in the administration's seriousness towards addressing these issues.

I would like to focus on two areas to begin with, and both of which you have touched on. The first is how important this is from a survival point of view.

I remember discussions on Nuclear Winter by Professor Sagan and others that only a 1- to 3-degree change in ambient year-round temperature would destroy much of the grain growing areas in the United States today. Those regions would be able to produce the grain that feeds a large portion of the world. Therefore, what we do here, while it does provide significant opportunities and is important simply from an environmental perspective and the quality of life issues, also contains an element of survival. If we are lax in our concern for the environment, we could see much of the world's productive land laid to waste.

It seems to me that the United States has a great opportunity to help ourselves, and the world as well, to gain economically.

In Massachusetts, the utilities are now looking at purchasing additional power. However, they are not using the traditional bidding process where several major companies are asked to build a 600- or 1,000-megawatt coal, nuclear, or gas plant, and then try to subsequently figure out the problems with it. Rather, they look at all the options so that to find the best means possible to produce 1,000

megawatts of power through conservation while maintaining environmental standards. They do not necessarily clean up every last bit that comes out of the smoke stack, but they do augment the type of clean-up conducted naturally by the tropical rain forests.

So they are looking at nontraditional options.

Beyond that, of course, the many clean-up systems which the States, for years, have demanded of industry are actually methods that could be transplanted across the globe.

Is the administration looking at that end of it through the responsibilities of your Department? Or would it be more in the jurisdiction of the Commerce Department to try to find ways to spread this technology that would obviously benefit both the developing world and American manufacturers?

Mr. WIRTH. Clearly the Commerce Department has the lead role in promoting the export of U.S. technologies. We all together realize how enormously important and promising this is.

One has to only look at China. They have a rapidly growing economy. The Chinese gross national product is 7 percent per capita as that of the United States of America. It is growing rapidly. Where are they going to get fuel for that economy? Clearly right now they are going to depend upon their coal reserves, which are effectively very high sulfur, dirty brown coal.

The Chinese have come to realize that they have some major environmental problems coming along with that, and there are opportunities to work with the Chinese on clean technologies and ones that are more cost effective are significant.

The Japanese have recognized this market. In Agenda 21, which the Japanese have put together a remarkable document talking about opportunities in the 21st century in which, Mr. Chairman, they refer to the environmental technologies in the 21st century as being as promising for the Japanese economy as consumer electronics and automobiles were in the 20th century. That is a pretty stark contrast. And here is an economy that looks long term, effectively long term and, I think, provides, again, a kind of a challenge to us that we want to be prepared to pursue.

This administration is dedicated to that task. You know how much Senator Gore, now Vice President Gore, has put into this. And there is a push on this on a steady basis.

Mr. GEJDENSON. I think it is terrific what you are doing. There is no question from my perspective that the economic opportunity is there.

I was talking to a physicist who was meeting with some of the corporate entities from Japan recently, and there was one man sitting in the corner of the room and he said to him, "What is your job?" And he said, "My job is to see what is coming between 2010 and 2020." And at first he thought he was joking, and he said, "Whose job is that between now and 2010?" And he said, "That is somebody else's job."

They are taking the long-term view. And it is clear that if it is the Pacific Rim or China, as these emerging economies start to gain wealth, they are going to want a better standard of living and want to end the pollution that has often been scarring their environments.



And the country that positions itself with the right technology and focus and marketing and international trust on the issue is going to be the country that capitalizes on cleaning up the global environment. And I applaud you for your efforts.

Mr. WIRTH. If I might, Mr. Chairman, one footnote to your statement related to New England Electric—one of the really progressive and leading companies in the United States, under the leadership of the late Sam Huntington and Mr. Rowe. Mr. Rowe called the other day concerned about what we can do about environmental technology and how we might be able to take advantage of it. It was terrific.

He recognizes that cutting edge that is out there and recognizes the partnership that we must forge between the public and the private sector and said we are here and we would like to help. It is a perfect illustration of what you are talking about happening in your own backyard.

Mr. GEJDENSON. And I think we all have to go through the change. I was in the State House and utilities talked about getting into the business of weatherization and making homes and industries more energy efficient. It seemed like one more opportunity to build into the rate base. But in many ways, these corporate structures are best suited to take an overall best return to investment for new energy. And in the real world, often conservation is the most inexpensive way to add new power rather than building new facilities.

Mr. WIRTH. I hope you voted yes on all of those measures in the Connecticut State Legislature.

Mr. GEJDENSON. I think I did.

Mr. Roth.

Mr. ROTH. Senator, I had five questions for you, but I want to dovetail into the question that was just asked.

I don't mean to be alarmist or go off on the deep end, and maybe this is showing how far I have come—a conservative asking you to keep me from going off on the deep end—but scientists have been talking about a new black plague that is going to be coming. It is not a disease but a worldwide outbreak of health problems because of the environment.

I was interested, in *Newsweek* this week, "How Safe Is Our Food" and so on. And I am interested—I am curious, what is your position of our Government?

Are you focusing in on these problems, to keep Congress apprised of what is going on?

Mr. WIRTH. I have a portfolio that is broad and deep, but food problems are not listed among them. However, we are, you know, very concerned about the impact which various environmental considerations certainly can have as Congressman Gejdenson was mentioning in his opening remarks.

We also have some very significant questions related to food supply. You remember that Mr. Borlaug, the father of the Green Revolution, when he received a Nobel prize in 1971 or 1972, he said what the Green Revolution has done is to give us a 30-year window to catch up and really work on population stabilization and the related environmental problems.

I think it is probably fair to say that 20 of those 30 years have gone by. And we have not made nearly the kind of progress that we are going to have to make.

If you project this down the line, not to be Malthusian in that fashion, but if we look at what we learned about the science of food supplies and the integrity of our reserves and the need for reserves at a time when we are going to have weather crises, we have ahead of us very, very, very significant problems.

Mr. ROTH. Do you think these futurists who are talking about this black plague, do you think that they are too alarmist?

Mr. WIRTH. I haven't read that *Newsweek* article, so I can't speak to that article, but a lot of people talking about global climate change, as you know Congressman Roth, were accusing scientists of being alarmist when they were first discussing these issues 15 years ago.

And now I think the preponderance of the evidence clearly indicates that the amount of greenhouse forcing gases going to the atmosphere has sharply increased. And knowing everything that we know now, that it, therefore, follows that the chances are very good that the atmosphere is going to warm significantly. And, therefore, what we ought to be doing now is intervening at a time when it is still cost effective and maybe no cost for us to intervene.

Let's not wait until we get to the crisis. When we get to the crisis and crash measures—it is more difficult to deal with somebody after they get sick than protecting them and keeping them well.

Mr. ROTH. I am interested in food safety in our country, and I do feel that we need international standards and we need diplomatic effort in this area on safety standards.

The chairman is also interested in dairy products coming into this country. And I was amazed when we did our study to see the contamination of dairy products coming into this country. I do feel that we have got to have some initiative in this area, because it is not going to be enough for just us to do a good job; other countries have to do likewise.

Mr. WIRTH. I think we would all agree that there is a major international cooperative agenda that must be taken. And the United States, as the remaining superpower in the post-cold war era, has a responsibility to lead. And the world is asking us to lead on so many of these issues.

Mr. ROTH. Most of the attention on the greenhouse gas emissions has focused on carbon emissions and from cars and power plants and the like.

But methane, however, is another greenhouse gas that is generated by landfills. I see so many of these landfills around the country, and I experience what people have been telling me about them.

What types of steps can the United States take to reduce the emissions of these types of gases? What is your thinking on that?

Mr. WIRTH. We may not want to reduce the emissions. We may want to figure out how to use the emissions.

In southern Colorado, I visited last summer a landfill that is being mined by the public service company of Colorado capturing the methane that is coming out of the landfill and pumping that into the system of the public service company. Now, this is a no-

cost source for them. The cost is not in the methane itself. The cost is in the capturing and the distribution system. And it was worth it to the public service company to do so.

This was an experiment. It was working out for them, and now they plan to approach a lot of other landfills at the same time. We now have the technology to take this kind of a step. Methane is a very real problem. But as we view that as a problem, we can also view it as an opportunity.

Mr. GEJDENSON. Will the gentleman yield?

In Connecticut we manufacture fuel cells that are used at least in several test sites. Also, the government has begun, in sites where you don't have access to a distribution system, to collect the methane, run it through the fuel cell and distribute the energy through the electrical grid.

So there are a number of ways to capture and use this energy, and it is something that can have some economic benefit both in the manufacturing end of new systems as well as in the gas.

Mr. Fingerhut.

Mr. FINGERHUT. Thank you, Mr. Chairman.

First of all, Mr. Wirth, as a new Member of this committee, it is my first chance to tell you how much I have admired from afar, your work in the Senate on public-private initiatives and environmental policy. And I think you have helped us get into a new age of environmental policymaking in this country which is something that we desperately need.

Mr. WIRTH. Thank you, sir. I think we share a similar educational institution as well.

Mr. FINGERHUT. That is, I hope, to your credit.

I hope that I am not going to ask you something that we have already covered. The first subject in your prepared testimony was on the issue of the scientific basis for this evidence—for these conclusions.

And I am wondering what you think we need to be doing as the U.S. Government, now, in continuing to develop the scientific basis?

How much time and money ought we be spending on just determining whether there is a global climate change problem and the extent of it? Or how much should we be shifting our dollars and efforts into the resolution, the problem-solving phase?

Mr. WIRTH. Well, we still have a good deal to learn; although, it is not a frontier science anymore. It might have been a dozen years ago, as in the discussion I just had with Congressman Roth, at which point it was something new and people didn't understand it.

Now, with new satellite technologies and the very sharp progress in atmospheric science and a major research effort in the last decade, I think our understanding of greenhouse gas concentrations has gone up very, very sharply.

What we don't know in a lot of atmospheric science is the impact of a lot of this. We know that the gases are going up; and we can extrapolate to assume that if there are more greenhouse forcing gases in the atmosphere, therefore, everything that we know would suggest that the atmosphere is going to get warmer.

That suggests the second part: What public policy initiatives do we take?

On the first side, we have a lot of research to do on how much, how fast, and where. We don't know that yet. It is an imperfect science in terms of trying to figure out the regional or local impacts of this. And that means that we ought to have a continuing research effort that becomes much more sophisticated and much more difficult at the same time.

Mr. FINGERHUT. What is your level of confidence in our current efforts? And are we doing the right thing? Are the right agencies involved? Are we directing the research in the appropriate way?

Or ought we be taking a new look at our research efforts, again on the front end of this problem as opposed to the policy implications side?

Mr. WIRTH. My own belief is that we are doing a pretty good job. And it might be a good idea to come back at some point to assess how well—there was a lot of money being put into this in the late 1980's—our research dollars are being spent.

I remember there was a lot of competition in the Congress as to who was going to put what amendment in an appropriation bill and what research establishment was going to get the funding, and would this be done at the university level or in government laboratories.

The administration is conducting an investigation into our policies involving greenhouse gases, and we will be able to get a better sense as to how effective a lot of this research has been. And maybe some of it should be better coordinated.

There is always that possibility—and I am sure that a prod from you all doesn't hurt on that—to make sure that the taxpayers' dollars are being spent as well as possible.

Mr. FINGERHUT. One of the frustrations for me on the policy side of this in terms of helping other country and moving toward energy efficient manufacturing, I think you mentioned China as a rapidly growing economy, is that we have the question of: Is it going to be a completely, coal-based economy; and are they going to be contributing significantly to the climate change problem?

I come from a heavy industrial area, northeast Ohio; and we need to invest in updating our manufacturing base. And at the same time, we need to make sure that the rest of the world has an environmentally sound manufacturing base.

How are we going to balance the competing demands of wanting to update, unfortunately, the older manufacturing base in the United States and wanting to make sure that our developing, competitive, manufacturing bases are environmentally sound?

I am afraid that we are going to, frankly, kick start an environmentally sound and more efficient way for our competitors without assisting, at the same level, our domestic manufacturing base.

Mr. WIRTH. I don't think those are mutually exclusive by any means, and I think they are in some ways apples and oranges.

If we did, like in the 1970's and 1980's, sharply increase our investment domestically in more energy-efficient technologies, the manufacturing base in Ohio is probably 50 percent more energy efficient than it was in 1953. We have a long way to go. We are half as energy efficient as the Germans or the Japanese per unit of gross national product. We are enormously wasteful of energy.

What we have to do in the United States is to price energy appropriately and to make sure that we are understanding and taking into account as much of the full cost of energy as possible.

And this internalizing of costs, making sure that that is part of the process, is a constant quest by us all and certainly part of good accounting and good long-term strategies. That is going to help everybody.

And that is happening in this country. The market is driving a good deal of that. And I think your industries are finding, I will bet you, that almost every industry in our country, the person in charge of energy is probably a very senior person in the company. Twenty years ago, that was probably an assistant manager of the plant and they were not looking at energy because we weren't costing it.

We have become much more efficient and we want to continue to do so. Our efforts industrially and in the research that is done in the Federal Government ought to be linking with the private sector as much as possible to help us achieve greater efficiencies.

The energy bill of last year was another, albeit modest, step in the right direction. The situation related to the Chinese—or a situation we know better, the Russians, is one in which, if we can point out to them where major savings can be made, they can, in large part, pay for themselves.

If the Chinese are installing more energy-efficient technologies that are going to dramatically increase the way in which they use their own energy, that means that there are dollars left over to re-invest in those very energy efficiencies.

We see that in Russia right now working with Russian industry on natural gas and natural gas pipelines, in the flaming of natural gas, enormous amounts of energy is wasted.

Oil is probably a more egregious example, an enormous waste of fuel that could, in turn, pay for the process of modernizing and setting it up. It is a very different kind of a situation there. We have wastes which are more sophisticated and difficult to get a handle on in the United States, unlike what it was 20 years ago when it was pretty easy to get a lot of savings rapidly.

Mr. FINGERHUT. I thank you for your comments. I again want to applaud you and encourage you in your efforts in the administration. I think we are heading in the right direction, but we need to be aware both, frankly, of the problems of perception and the problems of reality. Given the competing views of industrial policy we must make sure that we have a sufficient emphasis on our domestic industries as we are also trying to address this around the world.

Mr. WIRTH. Energy policy is such a big piece of this and remains so. And we in the United States, as awkward as it is and difficult as it is, we have to continue to think about energy policy and the implications of energy policy.

The startling figure that comes to me: We are half as energy efficient as our two major competitors. We are spending \$400 billion a year on energy in the United States. If we were spending \$200 billion instead of \$400 billion, and the magnitudes are about in that area, think about what we, in turn, would have overall in our economy.

Mr. FINGERHUT. Thank you, Mr. Chairman.

Mr. GEJDENSON. Mr. Fingerhut's issues and the one that you are discussing, technology, make life easier. When I was visiting Israel in the early 1970's, we got to an apartment building that had six floors. At the bottom floor, there was a switch that turned the lights on, but only long enough to get to the third floor. Then there was another switch that got you to the top floor, but then it went out again as well.

In the new offices that have been redone in the Capitol-C-5, I think one of the rooms has the switch that, as you walk in, turns the light on. Although this is probably not the most efficient energy saver, with devices such as this switch, you no longer have to depend on a human remembering to turn the light on or off. It goes on automatically; and if there is no body motion in the room, it shuts off.

One of my frustrations in the last year has been seeing the American auto industry argue against energy efficiency standards for American automobiles, forgetting their own experience in the 1970's when Americans wanted to buy big cars right up to the day that the gas lines started. You would think that the American auto industry would be pushing for a higher fleet average so that they would have a product marketable both at home and around the world. If America had more fuel-efficient automobiles, we would be more competitive internationally.

Mr. FINGERHUT. Mr. Chairman, are you suggesting that we have hot air activated elevators in the Capitol?

Mr. GEJDENSON. That would be something for a freshman class to discuss.

The Clinton administration is faced with a number of policy options related to the energy efficiency issues we have just discussed: renewable energy, energy sector R&D, energy taxes, technology transfer, and mass transportation.

I understand from discussions that we have had that the White House will be leading that effort.

Would you care to elaborate on where we are going?

Mr. WIRTH. There will soon be announced a comprehensive program on this front, Mr. Chairman. It is extremely important, as we have learned, as I suggested earlier, from the National Action Plan set up by the previous administration, what was good about that, what wasn't good about that.

There were scores of public comments that came in on that process. We have learned a lot about the technology, the computer modeling; and all of that will be a part of a very broad and comprehensive plan.

It is also our intent, Mr. Chairman, to include the outside world as much as possible. This administration has tried to engage the private sector and the nongovernmental sector as much as we possibly can in all of the activities related to our work on environmental issues and global climate change. And that will continue in this instance as well. We have much to learn from those on the outside. And, after all, they are American citizens too; and they ought to be part of this process, both to do the job at home, as Congressman Roth has suggested, and to build coalitions around the world.

Mr. GEJDENSON. Let me ask you two final questions, then I think one of our colleagues has a few more. After that I believe we will be finished.

We have touched on this issue before, but I think some recurring arguments are that the data is not factual enough, the models are not good enough, and the estimates of what is going on and how it is affecting the world are not strong enough. As a result, all your models have been thrown out after an extended period of time.

Are we shooting in the dark too much? Do we need to do more work on modeling and more research on what is happening globally?

Do you feel confident that the data and the models being used provide an adequate basis for the policy decisions and the resulting expenditures requested of us?

Mr. WIRTH. I believe there is enough certainty to know that the level of greenhouse gases is increasing dramatically.

To extrapolate from that, that temperatures probably will become greater and that if we intervene now in a sensible fashion, we can come up with cost-effective strategies that can begin us on the route to making sure that we can reach stabilization at the 1990 level, the answer to the second part of the question is yes, as well.

We have much work to be done and much to learn about the specifics of this, Mr. Chairman. As I suggested in answering Mr. Fingerhut's good question, we have much work to do to know exactly where, how much, and how fast we believe that there will be global climate change from the increase in greenhouse forcing gases.

And we have much to learn about the exact measurement of this. But I think there is enough certainty across the scientific community research that was shared and broadly done in the previous administration and the Intergovernmental Panel on Climate Change, that we know enough to act now and act with some urgency.

Mr. GEJDENSON. Currently you are formulating goals for the year 2000. Should we wait to set targets for the year 2010 or 2020, or should we set those aims as well?

Mr. WIRTH. We can reach to the 1990 level by the year 2000. The big question is what happens after the year 2000.

I think that everybody's best sense would be to stabilize at the year 2000 for a long time to come. We still have much to learn about which strategies may be the most cost effective for doing so.

Let me go back to your discussion of fuel-efficient automobiles. I think that there are a number of people in the administration and the automobile industry who believe that we can take a leap beyond where we are today.

And remember that then-candidate Gore was speaking about having a time in which the internal combustion engine might be obsolete. That is a goal that I think everybody would like to reach, that we are getting to a point where we are working on different fuels and truly clean automobiles.

If we changed our transportation fleet dramatically over a 30- or 40-year period of time and had a very different kind of a fuel and a very different kind of a engine, we would have a very different set of emissions in the United States and would be in a position

in which the United States would be leading in a major global technology. That is a win-win-win situation for us. It is a win in terms of environmental protection; it is a win in terms of U.S. leadership; and it is a win in terms of the export of U.S. technology. And we ought to be pursuing that.

And that, again, is one of the combined goals of this administration where we believe that there is major synergism there, and we want to do everything we can to take advantage of that.

Mr. GEJDENSON. Finally, the Clinton administration, in its economic package, has proposed a broad-based energy tax. Some people felt that should have been a carbon tax.

I think the administration may have recognized, or at least felt, that a carbon tax would place too much of a burden on particular, already depressed areas in the country. We understand the decision of the Clinton administration to try to mitigate economic impact on a depressed region.

Now, the package that has basically been passed by the Ways and Means Committee at this point, if that package is approved by the Congress, do you have any indication that this will help us meet the greenhouse gas emission standards? Is there any way to take a look at the correlation?

If you don't have the information presently, just submit for the record the relative taxes on energy by our closest competitors.

Mr. WIRTH. First, the answer is yes, we do know that the passage of the Btu tax will be helpful just as a number of other measures that we have or will take in the country have been helpful.

The Surface Transportation bill passed a couple of years ago is a step in the right direction. The Clean Air bill is a step in the right direction. The Montreal Protocol is a step in the right direction. The energy bill that was passed last year—all of these steps add up.

And as it was suggested earlier, the United States has really taken a lot more steps than most countries have in specifically saying it is that we are doing. What we want to do in the Action Plan is define exactly the parameters of what still has to be done to reach the 1990 level. And there are still some uncertainties about that.

All of this, I might say, is just in the realm of sources. We have not talked at all about sinks, which you did in your opening statement, about what New England Electric is doing.

Looking at places where we can sequester carbon and how that might be changed, and then not looking very much at the methane question that Mr. Roth brought up and alternative technologies, there is an enormous area of potential that is economically promising for the United States. I stress that over and over again because for any of us to go away from a discussion of greenhouse strategies not understanding that it contains a wonderful potential for the United States of America, both domestically and in terms of foreign policy if we agree that we want to try to pursue it in that fashion, that is very important for us.

For the record, there is very good data put together by the World Resources Institutes on the question of where taxation is and maybe that is the best objective table to put in the record.

[The information referred to is retained in the subcommittee file.]



Mr. GEJDENSON. If I recall correctly, in the Soviet Union the energy classes were also massively subsidized. This policy may have helped to distort not only their nonmarket system, but their economy as well.

Mr. Manzullo.

Mr. MANZULLO. My understanding is that the administration, in an attempt to decrease the consumption of motor vehicle gasoline by the people of this country, wants to raise the taxes on their gasoline. Is that correct?

Mr. WIRTH. There is not a proposal that I know of for an increase in gasoline taxes.

Mr. MANZULLO. How about on the Btu tax?

Mr. WIRTH. There has been a proposal of a Btu tax which moves across all sectors of the economy and all parts of the country, and we believe is the fairest way in which to approach greater equities in the energy costs.

Mr. MANZULLO. Would a Btu tax also increase the cost of gasoline?

Mr. WIRTH. It would encourage greater efficiency in other areas. I think a Btu tax would have some impact on the price of a gallon of gasoline.

Mr. MANZULLO. The purpose therefore of the Btu tax with respect to the environment is to make the price of gasoline higher so people would use less. Is that a correct statement?

Mr. WIRTH. That is one of the purposes of the Btu tax. The central purpose, however, is to focus on the President's economic program and the need to deal with this dreadful deficit which plagues the country and its economy.

Mr. MANZULLO. We are talking about the environment, not the economy.

Mr. WIRTH. You asked what the purpose of the Btu tax was. I think its central purpose is focused on a long-term——

Mr. MANZULLO. Has anybody considered the fact that in one of the counties that I represent, people travel 30 and 35 miles each way getting jobs that pay \$5 and \$6 an hour, and then Washington says "You are using too much gasoline. We are going to impose a Btu tax."

That is a penalty, Counselor, on people who live on marginal incomes. It is also a penalty to business people, who operate with a very low margin of profit. I think it is improper. I think it is immoral to raise gasoline taxes so people use less gasoline.

That has a tremendous impact on small business. It has a tremendous impact on poor people. It has a tremendous impact upon people who live in Colorado, which is an area for recreation. It has a tremendous impact upon people who live in Illinois. It has a tremendous impact upon people who live in Maine that depend upon tourism, because every time the price of gasoline goes up, somebody is in the position where he or she is not able to drive that automobile a considerable amount of miles.

I think it is wrong for the administration to penalize the poor people and those on marginal incomes in this country in order to save energy.

Mr. GEJDENSON. Mr. Wirth.

Mr. WIRTH. I don't know whether that was a statement or a question. I think that is one way of doing one economic analysis. There is another economic analysis which can be done as well which suggests that for every dollar that the American consumer spends on a gallon of gasoline, that there is a subsidy for that gallon of gasoline to the nature of \$2 or \$3 per gallon that goes broadly through the economy that that consumer is paying as well.

I think if one is looking at equities for individuals who do not drive at all who are subsidizing other peoples' driving habits, I would suggest that is probably not fair. For those to be broadly subsidizing those who drive a great deal versus those who don't drive at all is probably not fair.

I believe there is a very broad school of thought saying that you ought to pay for what you get. Rather than person x subsidizing person y, if everybody is paying a full cost of that gallon of gasoline, one, there are greater equities in that; and second, if full cost is going to be recovered, people are going to be more careful with their expenditure. That is a kind of basic economics that is neither Republican nor Democratic, but certainly one in which during the last administration we made significant headway at starting to recover full costs.

Mr. MANZULLO. The basic economics, Counselor, is the fact that people cannot afford to pay one tax hike after the other in the price of gasoline because people end up driving less. When I practiced law in a small town in the County of Ogle in Illinois, it had 6,000 senior citizens living alone in the country out of 44,000 people. Most heat by oil, which is the most expensive type of heat that you can get.

To impose these type of energy taxes for the purpose of saving energy penalizes those people that can least afford to live in this country. It is a hack across the neck of people on marginal incomes.

I think there is a lack of sensitivity as to the impact of these theories. We are talking about real people, not theories. I know of people who, when gasoline went up in the 1970's, could no longer afford to drive to work because they were living marginally at that point.

With the high unemployment that we have back home and the suffering across the country, this is not the time to raise taxes.

Mr. WIRTH. Let me also suggest, as I did before, that the purpose of the Btu tax is focused on the economy and on this enormous deficit that we are living with, which ran, as you know, well out of control for the last dozen years, and this administration is determined to attempt to slow down the growth of that deficit, and we hope to reverse it.

It will need the cooperation of all people. We can't ignore the deficit and that extraordinary interest cost which is also a significant tax on all the people in your district, whether rich or poor or drive or don't drive.

Mr. MANZULLO. We are saying stop the spending going on in Washington and not raise the taxes.

Mr. GEJDENSON. If the gentleman would yield, I suggest that maybe the gentleman propose his alternative budgets on where he would have his spending cuts and where he would like his taxes.

We would love to see it, but not at a meeting on the environment and global policy.

Mr. Roth.

Mr. ROTH. Thank you, Mr. Chairman.

I have to agree with our colleague from Illinois. People are concerned about taxes, and rightly so. We spent most of our time here talking about domestic issues when your expertise is also in international issues. You were in South America when I was there and concerned about the rain forests.

What are we doing diplomatically to resolve that issue? In my opinion, what is happening in the rain forests, that is a real disaster.

Mr. WIRTH. When I was there leading a delegation with the late Senator Heinz and Senator Gore, we sat down with President Sarney of Brazil, the two-times-ago President of Brazil. I brought up the subject of the rain forest and the first thing that President Sarney said was "Why are you here talking to us about the rain forest when you in the United States"—his words—"are wantonly tearing down the last great rain forest in North America," referring to the Tongass National Forest in southeast Alaska.

There is validity to that, that we have to be sure that we lead not only by rhetoric, but also by example, and slowly but surely we are getting our forest practices in line and slowly but surely we are attempting to remove the subsidies in various areas which lead to very uneconomic practices. We are learning how to do that.

You know how politically and sometimes economically difficult that is, but it is slowly but surely happening. At the same time, our scientific community is working closely with the Brazilian scientific community and not only in the transfer of technology and knowledge, but also in the broad awareness that tearing down the rain forest for agricultural purposes is counterproductive.

As you know, most of the wealth in the rain forest is found in the canopy of the rain forests and not as we have in North American, in the soils. So if you tear down the rain forests, you are losing the wealth in the canopy. The soils are fragile and thin, might raise crops for a couple of years, might support cattle for five or eight and then they are gone.

Teaching, as we must, how to harvest the rain forest, how to prospect in the rain forest, how to use the rain forests more productively is an effort we continue to work on with a country that is increasingly aware of this and increasingly concerned itself about what is happening in its own backyard.

Mr. ROTH. The issue of the rain forest is extremely important to people all around the world. When the President says look what you are doing in Alaska, we are doing a good job of managing our forests. Our loggers, I commend them for the job they are doing. You know, we have to be aware that yes, we are concerned about the spotted owl, but we are also concerned about jobs.

Mr. GEJDENSON. If the gentleman will yield—

Mr. ROTH. Yes. What are we—this is in the Senator's department. What are we doing diplomatically now to protect the rain forests?

Mr. WIRTH. We are working with the Brazilian Government. It is their rain forest, not ours. We are working with them to do ev-

everything we can to implement the Biodiversity Treaty. We agreed the United States would sign the Biodiversity Treaty, which gives us the opportunity to work more carefully with the Brazilians and others in the examination of the biological wealth that exists in the rain forest and to, in the words of America a hundred years ago, "prospect in the rain forest."

Just as we once prospected for gold in the Rocky Mountains of the United States, we can prospect for biodiversity and biological wealth in the rain forest and learn how to use that productively and harvest the rain forest in a fashion without tearing it down.

Mr. ROTH. How about the foreign aid dollars that were going to build a road into the rain forests?

Mr. WIRTH. I am not sure that I know that there were recently dollars that were there. When we were in Brazil and Chile in 1989, there was a major road being built through Amazonia designed to go over the Andes and to the Pacific Coast and in that way to allow the Japanese to have access to the inside of the rain forest which, it was agreed upon, would have been a great tragedy for the rain forests.

We went to President Bush, who spoke to the Japanese leadership, and that road stopped. I think that was the last major road that was being built in the rain forest having the impact that early roads might have. There may be others being begun, but I don't think so. I think we have learned a lot about that and much less of that is going on.

Mr. ROTH. I appreciate President Bush doing that.

I yield.

Mr. GEJDENSON. It is important to note that we have worked on debt-for-nature swaps, and we are currently working on a fund to encourage other countries to join us for nature swaps and retirement funds. However, we should not minimize what you said at the beginning of this process. We argue that we have to keep timber harvesting in the Northwest because lumberjacks need their jobs to maintain the economy of the region.

In the rain forest, people are talking about harvesting crops for survival. We have to recognize that their challenge isn't simply a question of standard of living. We need to work with them to find some way to end the destruction of the rain forests. Environmentalists argue that we are destroying the rain forests with our lifestyles. Or, in the case of the Tongass, we were subsidizing the Japanese devastation of the environment because most of the pulp went to Japan for rayon.

On the other hand, farmers wiping out rain forests are doing it for the survival of their families. I think that in our role as a world leader, we need first to do a better job managing environmental issues here, thereby giving us a stronger moral base with which to lecture other nations regarding their own policies.

Mr. ROTH. When you cut down a tree in Wisconsin or Alaska, you can always replant that tree and you have good forest management through logging; but when you destroy the rain forest, that forest is destroyed.

Mr. GEJDENSON. I think we can finish this debate another time. If you are looking at the rain forest in the Tongass, you can't simply replace the trees. You are destroying a habitat. The structural

damage that kills a habitat also can destroy a species. So I think we have to be a little more sensitive to what we are doing.

Mr. ROTH. One more question for Senator Wirth. What bothers some of us—we want to work with you, but from the testimony we have today and the reason I am asking this question is so you can respond—that we have nations, for example, attending the Rio Convention. How many nations were there?

Mr. WIRTH. I think 160-plus nations were in Rio.

Mr. ROTH. Virtually the United States is the only country coming up with specific goals as to how to meet the mandates of the convention. Today you again had mentioned that the United States has to be a role model and we have to make the sacrifices; we have to set the example. We are not asking those other countries to do anything.

It seems we are always coming down on our own people and not asking the other countries to do their share. That bothers me.

Mr. WIRTH. I would be bothered as well if we had reached a time when everybody agreed that action plans are in place and everybody should be taking steps. We are not there yet. The first meeting of the followup to Rio will occur in June in New York, the first 2-week period of the Commission on Sustainable Development.

At that time, all of the parties who are part of that commission will agree upon the criteria and will agree upon the dates and the deadlines for the development of action plans and the way of monitoring those action plans. There is not yet an international agreement on when they should be in place, how we are going to monitor them. That is the next step coming out of Rio, and we are working on that now.

While that is going on in these international fora, we believe that we in the United States do have a responsibility to lead and that as we go and participate in the CSD and other international negotiations, that if we in the United States have our ducks in line, that we are in much better shape not only to exercise our responsibilities as the remaining leader of the world, as the remaining superpower, but also to help show other countries how to get from A to B to C to D.

That process started in the previous administration with the first action plan. We have learned from that and will have a full action plan done by the end of August. We believe that that is the kind of leadership that we ought to exercise and we believe that that is a step in helping the rest of the world come to the goals of reaching the 90 targets by the year 2000 that I think most people agree we would like to get to.

Mr. ROTH. I understand your explanation. I just don't know if I agree with it.

The National Action Plan for Global Climate Change, which I think is very well done, in this chapter on energy production and consumption, they talk about the United States using more energy. Our needs for energy have grown. If we are going to cut the greenhouse gases, does this mean that we are going to have to use less energy?

Mr. WIRTH. We can use energy much more efficiently, as you and I both know. I think the assumption that the only way you can

have economic growth is to have a growth in energy are a set of assumptions that were pretty well dismissed during the 1970's.

After the oil crisis in 1973, we saw the country adapt very dramatically and learn how to use energy much more efficiently. We still have a long way to go.

As I noted earlier, we are still half as efficient as the Germans and the Japanese in the use of energy. If we were as efficient as they are, our economy would be much, much more competitive than it is today.

Mr. ROTH. So we know your goal. What are you striving for? Can you give us a couple of sacrifices we would have to make to fall in line with what you are thinking is?

Mr. WIRTH. I don't know whether you would call them sacrifices or not. We talked earlier about clean car technologies. We believe that that is an enormously promising area for the United States in terms of our technology, in terms of the economy of the country, and for the environment.

We think that there is a great possibility there for the United States to emerge as a dramatic world leader in this set of technologies. We are working on that right now. The automobile companies are very enthusiastic about setting up a partnership.

You heard that discussed in a number of places. That is an example. A second example—

Mr. ROTH. A partnership. Does that mean the government will be in partnership with the companies?

Mr. WIRTH. The research and development done by the U.S. Government increases on a steady basis in various areas, and we have done that for a long time, in computer technologies, in energy technology, in science and technology, ship building in Connecticut, in a variety of places and would hope to continue to do so. I suspect there is probably a significant amount of U.S. Government research and development related to the dairy industry in Wisconsin. I can't speak to that for sure. So there is nothing new about this partnership. It is a matter of where we focus it and are we willing to look at long term targets of opportunity.

Mr. ROTH. But I thought the President was interested in downsizing the government, downsizing our Government.

Mr. GEJDENSON. I think the President talked about a partnership. If you look at what we have done in the last 20 years, I can remember when the automobile companies said you could never get to a car that had 25 or 30 miles per gallon. Think about the 1960's when automobiles regularly got 6 and 8 miles to the gallon. Although some may argue that the consumer will be harmed by a Btu tax, when we increase the efficiency of his automobile by 15 percent, any increase in the cost per gallon of gasoline is more than compensated for.

When I had my first car in 1966 I paid 35 cents per gallon of gasoline, but got only 6 or 7 miles on each gallon. Today I pay \$1.25 for a gallon of gasoline, but I average around 22 or 23 miles per gallon. As you can see, it is a lot less expensive to use gasoline than it was in 1966.

Mr. Manzullo.

Mr. MANZULLO. That is because you had a Cadillac. I had a Ford Falcon in 1964 that got 25 miles a gallon and gasoline was 17 cents a gallon.

Mr. GEJDENSON. The gentleman needs to check not just his tax facts, but also my driving facts. I had a Mustang GT, which got just as bad mileage.

Mr. MANZULLO. Mr. Wirth, I appreciate your coming here this afternoon. I do have a suggestion in terms of the research that I think is long overdue. There is obviously a delicate balance between growth and consumption of energy and the environment.

My wife is a microbiologist. We have a game preserve on our farm in conjunction with a small cattle operation, the two exist side by side. One of the things I would like to see the administration do is an environmental impact study on people's lives as they are reflected whenever any type of energy taxes are increased.

For example, energy taxes will increase the cost of bus fares. It keeps going down the line. Energy taxes will increase for example the cost that my brother charges for food at his restaurant because he has to pay more to the people trucking food to his restaurant. He has to raise prices in order to offset the price increase to him.

So we are in a situation where raising the cost of energy in order to conserve energy puts us in a situation where we may have spiraling inflation. We may have people pushed to the wall where they cannot afford to pay any more for the energy than they are presently paying.

I appreciate the tough stance that you are taking for the environment. I would suggest that people are part of the environment also, and the impact of taxes has to be weighed upon the people of this nation.

Thank you very much for coming.

Mr. WIRTH. Thank you very much. I know the President agrees with you. We have to be very careful about the impact on people, the impact of the deficit, and the impact of interest rates are very significant indeed. If we are not able to alleviate that burden it will be enormously difficult for our children and grandchildren to enjoy the level of living that all of us in this generation have had.

Mr. GEJDENSON. Thank you for your efforts here today and your work in the past. We look forward to working with you. We have a significant challenge ahead of us, but this challenge is also a great opportunity to leave a better planet for our children and our grandchildren, and to make our industries more efficient and more competitive. The President could not have chosen a person better than you to instill confidence in us that the job will be completed successfully.

Mr. WIRTH. Thank you very much Mr. Chairman. Congressman Roth and Congressman Manzullo, thank you.

[Whereupon, at 3:00 p.m., the subcommittee was adjourned.]





## APPENDIX

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### OPENING STATEMENT OF REPRESENTATIVE SAM GEJDENSON, CHAIRMAN, SUBCOMMITTEE ON ECONOMIC POLICY, TRADE AND ENVIRONMENT

From the start of the global warming debate, many have argued that we cannot protect the global environment and the interests of U.S. business at the same time. Tough action on global warming, they argue, will cause far-reaching damage to the American economy.

Nothing could be further from the truth. American firms are on the cutting edge of renewable energy, energy efficiency, and clean coal technologies. Tough U.S. action to stem global warming will help ensure that American firms will move forward with environmentally sound technology which will undoubtedly dominate the international market in the 21st century.

In the subcommittee's hearing in March on global climate change, it was clear that the Bush administration's National Action Plan failed to grasp this basic concept. This was by no means the only flaw in the draft plan, however.

The plan failed because it did not commit the United States to return to 1990 levels of greenhouse gas emissions by the year 2000.

The plan provided no direction for American policy because it simply restated existing U.S. efforts to reduce greenhouse gas emissions.

The plan returned to the "hat and sunglasses" days of former Interior Secretary James Watt by giving too much attention to the different ways that Americans can live with the effects of global warming, such as rising oceans.

President Clinton, however, has made it clear that Congress can expect a completely different global warming policy from his administration. In his recent Earth Day speech, the President announced that the previous administration's National Action Plan would be thoroughly rewritten. In a dramatic break with the past, he also said that the United States would return to 1990 levels of greenhouse gas emissions by the year 2000.

Today, we have the opportunity to receive testimony from the Honorable Tim Wirth. We are fortunate to have him heading up the administration's efforts to protect the global environment. I called today's hearing so that we could discuss the details of the Clinton administration's new global climate change policy. In particular, I would like to examine:

- the strengths and weaknesses of the draft plan from the Clinton administration's standpoint;
- the new policies and programs being considered by the administration to improve the plan's effectiveness;
- the timetable for reviewing and improving the plan, particularly those aspects related to technology transfer; and,
- the possibility of committing the United States to further reductions in greenhouse gases beyond the year 2000.

By signing the Climate Change Convention in Rio, the United States agreed to draft a meaningful plan to reduce greenhouse gas emissions and to help developing countries achieve this important objective. Having examined the Bush administration's draft plan, it is clear that the United States has yet to live up to its commitment.

I believe that the United States must put together a meaningful, far-reaching plan to reduce U.S. greenhouse gas emissions and to promote U.S. environmental technology firms. I would like to thank my old friend and colleague, Tim Wirth, for coming before the subcommittee today to explain how such a plan will be written.

**Testimony of Timothy E. Wirth  
Counselor, Department of State**

**Committee on Foreign Affairs  
Subcommittee on Economic Policy, Trade and Environment**

**May 18, 1993**

I am delighted to be with you today to discuss the Clinton Administration's policies on global climate change. I am especially pleased to appear before the Subcommittee on Economic Policy, Trade and the Environment as this subcommittee will consider many of the priorities that our nation is facing in a challenging and changed world order.

Foremost among those challenges is a broad set of international environmental concerns about which we are learning more all the time. Perhaps overarching all others -- in terms of its centrality, complexity and challenge -- is broad scientific and international concern about the issue of global warming.

Addressing this issue will require close collaboration between the Administration and the Congress, including this Committee. It will also require significant U.S. leadership because we cannot solve this problem on our own: we must help guide the international resolve that has developed in support of action to prevent dangerous human intervention in the complex climate system that influences so many aspects of our society and our world.

**Scientific Context**

Let me begin by reviewing the international context in which we now confront the issue of global warming.

While concern about human intervention in the Earth's natural climate system has existed for some time, global warming has emerged rapidly in recent years as a powerful foreign policy and diplomatic issue. Driving this process have

been advances in the scientific basis for concern. As our understanding of the atmosphere has improved, we have become more aware of how our actions affect it. It is clear that human activities are increasing atmospheric concentrations of "greenhouse" gases (carbon dioxide, methane and nitrous oxide). While there are uncertainties about the magnitude, timing and regional patterns of effects of increased greenhouse gas concentrations, there is sound scientific evidence that the rate of climate change in the next century could far exceed any natural changes that have occurred in the last 10,000 years, and that the Earth would be warmer than it has been in millions of years. Furthermore, the change in atmospheric composition will persist for decades and possibly centuries because of the long atmospheric lifetime of some of these gases.

### The Climate Convention

Last year, the international community acknowledged this scientific concern and took the first steps to address this significant challenge for the world. More than 150 nations signed the Framework Convention on Climate Change at the Earth Summit last June -- and to date it has been signed by more than 160 countries. The United States, along with sixteen other nations, have now ratified the treaty.

As you and this committee are aware, Mr. Chairman, the Climate Convention was the subject of considerable discussion and debate last year. Let me take a moment to discuss what specifically is in the treaty.

The Convention's ultimate objective is to:

"[A]chieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner."

This is a major undefined challenge perhaps requiring massive reductions in emissions. As a first step to agreeing on the international action required, the Convention set forth a series of commitments in Article 4. While the language of these commitments is rather confusing, let me quote the critical lines from paragraph 2 (a) and (b) of this Article. Article 4.2(a) states:

"... parties shall adopt national policies and take corresponding measures on the mitigation of climate change, by limiting ... anthropogenic emissions of greenhouse gases and protecting and enhancing ... greenhouse gas sinks and reservoirs. These policies and measures will demonstrate that developed countries are taking the lead in modifying longer-term trends in anthropogenic emissions consistent with the objectives of the Convention, recognizing that the return by the end of the present decade to earlier levels of anthropogenic emissions ... would contribute to such modification..."

Article 4.2(b) goes on to say:

"In order to promote progress to this end, each of these Parties shall communicate ... detailed information on its policies and measures referred to in subparagraph (a) above, as well as its resulting projected anthropogenic emissions by sources and removals by sinks of greenhouse gases ... with the aim of returning individually or jointly to their 1990 levels these anthropogenic emissions ..."

While the language contained in these paragraphs is non-binding in terms of emissions reductions requirements, the intent of the negotiators was to have countries move toward the Convention's ultimate objective through the preparation of inventories of their net greenhouse gas emissions -- including both sources and sinks of all greenhouse gases, and the adoption by developed countries of national policies and measures to mitigate climate change and to limit greenhouse gas emissions. Furthermore, the Convention calls for developed countries to provide resources to help developing countries meet their obligations under the Convention. And, finally, it calls for countries to report on the actions they are taking to meet their commitments. The Conference of the Parties, which the United States anticipates will meet for the first time in mid-1995, will review these reports, and the adequacy of the commitments under the Convention. Subsequent reviews will take place at regular intervals, with the second review coming no later than December of 1998.

#### Clinton Agenda

Since assuming office, President Clinton has directed his Administration to conduct a broad review of international environmental concerns, including global climate change. Through this process, the President has determined that the United States should provide leadership to help guard against undesirable global climate change.

President Clinton clearly set forth the direction of our climate policy in his Earth Day speech. He said:

"We ... must take the lead in addressing the challenge of global warming that could make our planet and its climate less hospitable and more hostile to human life. Today, I reaffirm my personal, and announce our nation's commitment, to reducing our emissions of greenhouse gases to their 1990 levels by the year 2000.

"I am instructing my administration to produce a cost-effective plan by August that can continue the trend of reduced emissions. This must be a clarion call, not for more bureaucracy or regulation or unnecessary costs, but instead, for American ingenuity and creativity, to produce the best and most energy-efficient technology."

The Administration is committed to seeing the Convention promptly implemented, and, if necessary, strengthened. To this end, the Administration is taking a two-pronged approach: a domestic effort to reduce emissions and enhance sinks of greenhouse gases; and an international effort, including working to implement the convention, and to support developing countries, and countries moving toward free market economies, in meeting its goals.

#### The Domestic Effort

To realize the domestic requirements of the President's commitment, preparations have begun to develop a plan that will identify steps we can take to return U.S. emissions to 1990 levels by the year 2000. This will be the focus of our efforts in developing the August Plan.

Under the Climate Convention's Article 12, developed country Parties must report on their actions within six months of the Convention's entry into force, which is expected by late 1994. The August Plan will be the cornerstone of that report, but we anticipate that the next full version of the U.S. National Action Plan will be developed after August in time to meet our Convention commitment.

In developing the August Plan, the Administration intends to identify and pursue what we believe are numerous cost-effective actions which may bring us close to our commitment of returning U.S. emissions to 1990 levels by the year 2000. The government has received a host of these kind of measures as part of the public comment period established for the Bush Administration's draft Action Plan, issued last December.

But these measures alone may not be enough to meet the longer-term goal of continuing the downward trend in emissions. If we are to accomplish that, we will need to look more broadly at a wide array of actions. Most importantly, we will need to establish a framework for identifying new options for our action agenda as we come to grips with the long-term nature of addressing global warming. As we do so, we will need to identify those actions that are the most cost-effective.

Very shortly, the Administration will announce how we will develop the plan to fulfill the President's commitment. This policy development will involve the Executive Office of the President and all relevant agencies. We will encourage constructive suggestions from stakeholders and expect to hear some new ideas and fresh thinking about how federal policy can help enhance markets for energy efficient technology and make our economy more competitive while reducing our emissions of greenhouse gases.

#### The Clinton Policy on Climate: A Break from the Past

The essential difference between the Clinton Administration and the previous Administration on climate change is that we are developing a domestic climate change policy, and will use that policy to play a leadership role in promoting an effective global response. Our policy development process will represent a significant departure from that undertaken by the Bush Administration when it produced a draft Action Plan in December. Let me briefly speak to the problems with that first iteration particularly through the public comment process.

Although the Bush Plan met the letter of the requirement established by the "Prompt Start" Resolution of the convention negotiators, it was not adequate to the task before us -- meeting a national commitment to reduce our emissions to 1990 levels by the year 2000 and continuing our efforts over the long term.

Here are a few examples: the first draft extensively discussed our national circumstances, but it did not set forth how we can best tailor our actions to reduce emissions to take account of those circumstances. The first draft had a section on emissions inventories, but it did not set forth clearly and concisely the baseline numbers, or provide detailed descriptions of which gases are produced in which sectors -- all critical information for reducing emissions. The draft addressed at length the question of adaptation to climate change -- but created the impression that all climate impacts will be manageable at no net cost to the economy.

The draft was incomplete on the measures that can be taken to mitigate the effects of climate change. It failed to state clearly what projected U.S. emissions levels would be -- either with or without the actions identified in the draft. The draft addressed emissions by the year 2000 -- but avoided any mention of trends beyond that date. In fact, there was virtually no discussion of steps that will be critical to develop a longer term strategy -- in particular, to develop low-emitting technologies and engage the private sector.

In the more than 40 sets of comments received on the Bush draft Plan, one prominent theme was the number of activities underway in the private sector to reduce greenhouse gas emissions. For example, in 1992, Pacific Gas and Electric, the nation's largest utility company, through its more than 50 conservation programs, was able to prevent the release of 280,000 tons of carbon. Yet in the first draft, the discussion of programs like PG&E's (including how to develop more programs like it) are inadequate -- much more was being done in the private sector, and should be acknowledged and credited.

If we are to deal seriously with the threat of global warming, we must find ways to harness the dynamism and creativity of our private sector and put market forces to work in support of environmental goals. It is the Administration's expectation that the new Plan will address these critical needs more fully.

#### U.S. Efforts Internationally

Our actions alone, even as large as we are, will not be enough to reverse the overall upward trend in atmospheric concentrations of greenhouse gases. We must establish a partnership with other countries. Sources of emissions are spread globally, and action to reduce emissions undertaken anywhere on the planet has global significance. The United States currently contributes about 20 percent of global net emissions, although our share is declining. Developing countries represent an increasing share of the total emissions, about 40 percent today and perhaps rising to 60 percent by 2030.

To make a significant contribution to protecting the climate, the United States must first demonstrate its own resolve and then leverage our example in encouraging efforts to reduce emissions the world over. Within the scope of our limited resources, the United States must promote a "partnership" approach between developed and developing countries. Such an approach must reconcile different but compatible interests in environment and development. That there are compatible interests is clear -- assistance we provide to developing countries will meet both our needs: ours,

with respect to the strong concern we have for the preservation of the global environment and for the creation of domestic jobs in environmental technologies; theirs, both for their own environmental concerns, and for the concomitant requirement to continue along the path of environmentally sustainable economic growth.

To begin resolving this issue, industrialized countries will have to take the lead in implementing the Convention's commitments (as agreed in the Convention language itself) and encourage developing countries to follow. In my view, such leadership will be linked to the quality of our national responses, as well as to the extent of the financial and technical assistance we and other industrialized nations can provide to developing countries.

### Country Studies

The United States has already begun to demonstrate our concern for addressing the longer term global effort. We are providing \$25 million to a U.S. country studies initiative which will provide an analytical and institutional foundation from which countries may develop appropriate measures and actions to address climate change. Studies enable countries to address vulnerabilities to climate change, measures to limit net greenhouse gas emissions, or both. Country studies could also be used to assess the measures necessary to meet the obligations of the Convention, including by developing national inventories of greenhouse gases and by identifying actions and measures to mitigate greenhouse gases or to adapt to climate change.

Participants in the Country Study Program will generally receive funds and associated technical assistance both during the organization of the work and as it progresses. Assistance would cover specific, high-cost activities, including data development, institutional or infrastructural development, model-building, or procurement of special equipment, as well as lower cost technical assistance and project monitoring. The Country Studies Initiative, which is coordinated through a State department committee, is operated by DOE, EPA and AID.

### Modifying the Convention

Under the provisions of the Climate Convention, all parties are called upon to formulate and implement programs to reduce greenhouse gas emissions, with developed countries taking the lead. There is broad agreement about the first step in this effort: countries are aiming to return their emissions to 1990 levels by the year 2000.



To move forward, I believe that our work under the Convention must focus on the longer term. Once all countries have ratified the Convention -- and the State Department will be beginning a campaign to encourage this -- we must evaluate the obstacles to its implementation, and work to overcome them. As I noted earlier, the preponderance of future emissions are most likely to come from the developing countries. We must therefore begin now to develop appropriate responses to help these countries reduce their emissions while continuing in the path toward economic prosperity, a response that is sure to involve the development, and commercial exchange of new environmentally sound technologies.

One of the charges that has in the past been leveled against those who have advocated a strong environmental policy -- such as the one required to address global warming -- is that environmentalism and economic growth cannot coexist. I do not agree. I strongly believe that a sustainable environmental future is economically imperative. We must think about the long-term nature of the environment we pass down to our children. And, simultaneously, we must also concern ourselves with the present welfare of our country. Investment in environmental technology is one way to reach this goal.

As President Clinton noted in his Earth Day speech, there will be, by the end of this decade, a \$300 billion market for environmental technologies, and the United States must capture as much of that market, and the tens of thousands of jobs it will create, as possible. This in an area in which the United States can -- and must -- continue to be a leader. We must continue to build our technological markets, both at home and abroad.

These are the kinds of programs that this Administration will support in our efforts to address climate change.

As adopted, the Climate Convention is but one piece of the international policy framework that can help us redirect our thinking. The task before us is to take the next steps. I look forward to working with you all as we move ahead.

Thank you. I would be happy now to respond to any questions you may have.

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